

What is claimed is:

1           1. A method of detecting a defect in a scan chain, the method comprising:  
2                 applying a plurality of pattern sets to a scan chain coupled to an array  
3           built-in self-test (ABIST) circuit;  
4                 collecting, from the scan chain, scan out data generated as a result of the  
5           application of the plurality of pattern sets to the scan chain; and  
6                 using the collected scan out data to identify a defective latch in the scan  
7           chain.

1           2. The method of claim 1, further comprising:  
2                 sensitizing at least one alternate path within which the scan chain is  
3           disposed; and  
4                 applying a second plurality of pattern sets to the scan chain while the  
5           alternate path is sensitized.

1           3. The method of claim 1, wherein using the collected scan out data to identify  
2           the defective latch includes identifying a location of the defective latch in the scan chain.

1           4. The method of claim 1, further comprising performing at least one of a scan  
2           test and a flush test prior to applying the plurality of pattern sets to the scan chain.

1           5. The method of claim 1, wherein applying the plurality of pattern sets includes  
2           laterally inserting each pattern set into the scan chain using the ABIST circuit.

1           6. The method of claim 1, wherein collecting the scan out data includes serially  
2           stepping the scan out data through the scan chain to an output thereof.

1           7. The method of claim 1, further comprising reconfiguring the scan chain prior  
2           to collecting the scan out data.

1           8. An apparatus, comprising:

2                 a memory; and

3                 program code resident in the memory and configured to detect a defect in a  
4           scan chain disposed in an integrated circuit device by collecting, from the scan  
5           chain, scan out data generated as a result of an application of a plurality of pattern  
6           sets to the scan chain by an array built-in self-test (ABIST) circuit disposed in the  
7           integrated circuit device, and using the collected scan out data to identify a  
8           defective latch in the scan chain.

1           9. The apparatus of claim 8, wherein the program code is further configured to

2           sensitize at least one alternate path within which the scan chain is disposed, and apply a  
3           second plurality of pattern sets to the scan chain while the alternate path is sensitized.

1           10. The apparatus of claim 8, wherein the program code is configured to use the

2           collected scan out data to identify the defective latch by identifying a location of the  
3           defective latch in the scan chain.

1           11. The apparatus of claim 8, wherein the program code is further configured to

2           perform at least one of a scan test and a flush test prior to applying the plurality of pattern  
3           sets to the scan chain.

1           12. The apparatus of claim 8, wherein the program code is configured to apply

2           the plurality of pattern sets by laterally inserting each pattern set into the scan chain using  
3           the ABIST circuit.

1           13. The apparatus of claim 8, wherein the program code is configured to collect

2           the scan out data by serially stepping the scan out data through the scan chain to an output  
3           thereof.

1                   14. The apparatus of claim 8, wherein the program code is further configured to  
2 reconfigure the scan chain prior to collecting the scan out data.

1                   15. The apparatus of claim 8, wherein at least a portion of the program code is  
2 resident in a test platform.

1                   16. The apparatus of claim 15, wherein at least a second portion of the program  
2 code is resident in computer coupled to the test platform.

1           17. A program product, comprising:

2                   program code configured to detect a defect in a scan chain disposed in an  
3           integrated circuit device by collecting, from the scan chain, scan out data  
4           generated as a result of an application of a plurality of pattern sets to the scan  
5           chain by an array built-in self-test (ABIST) circuit disposed in the integrated  
6           circuit device, and using the collected scan out data to identify a defective latch in  
7           the scan chain; and

8                   a computer readable signal bearing medium bearing the program code.

1           18. The program product of claim 17, wherein the computer readable signal  
2           bearing medium includes at least one of a transmission medium and a recordable  
3           medium.